

Work Order ID 53252

October 28, 2009 2:32:24 PM



PRELIMINARY ISSUE

Page 1

Item ID: D4015-1/-041

Accept



Setup Start



Revision ID: A-PRELIM

Stop



Item Name: Wearbar

Start Date: 10/28/09 Start Qty: 10.00



Cust Item ID:

Required Date: 10/30/09 Req'd Qty: 10.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D4015

A-PRELIM

100

0.00



Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg D4015

Dwg Rev: PRE 09.10.28

Prog Rev: Lim

2-Deburr if necessary

= 7 m-l 09/10/29

22X

22

110

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

13 9-10-28

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Page 2

Item ID: D4015-1

Accept



Setup Start



Revision ID: A-PRELIM *09.10.28*

Stop



Item Name: Wearbar

Start Date: 10/28/09 Start Qty: 10.00



Cust Item ID:

Required Date: 10/30/09 Req'd Qty: 10.00

Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control

130

Form as per dwg

0.00



Brake NC

Memo

0.00

Brake NC

140

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

ENGINEERING
APPROVAL

(+22)

Work Order ID 53252

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Page 3

Item ID: D4015-1

Accept



Setup Start



Revision ID: A-PRELIM 09.10.28

Stop



Item Name: Wearbar

Start Date: 10/28/09 Start Qty: 10.00



Cust Item ID:

Required Date: 10/30/09 Req'd Qty: 10.00

Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150 Large Fab	Weld per dwg A/R Hardcoat S.S. Batch: <u>7112963</u>	0.00							
	Memo	0.00							
160 QC	QC5- Inspect part completeness to step on W/O	0.00							
	Memo	0.00							
170 QC	QC9- Inspect visual per QSI004- Fusion Welds	0.00							
	Memo	0.00							

8/10/29

ENGINEERING
APPROVAL

EL 9-10-29 (X22)

(X22) 6

10/10/29

Work Order ID 53252

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Page 4

Item ID: D4015-1

Accept

Setup Start

Revision ID: A-PRELIM 09.10.28

Stop

Item Name: Wearbar

Start Date: 10/28/09 Start Qty: 10.00

Cust Item ID:

Required Date: 10/30/09 Req'd Qty: 10.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

180

Identify as per dwg & Stock Location:

0.00

USE FOR TESTING SCAR



ASDAG15-041

09.10.28

0.00

REMAINING PARTS.

Packaging

Memo

Packaging

09.11.27

10/12/01

190

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

09.10.30 Prototype only.

R00324ADEL

POSITIVE RECALL
EFFECTIVE 09.10.28
RELEASED 09.11.27
AUTH
DATE

Picklist Print

Page 1

October 28, 2009 2:32:23 PM

Work Order ID: 53252



Parent Item: D4015-1

Parent Item Name: Wearbar

Start Date: 10/28/09

Required Date: 10/30/09

Comments:

Start Qty: 10.00

Required Qty: 10.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
M304S16GA		Purchased	No			100	sf	212.6506	0.1000	12		



304/316 Sheet .063

12 9-10-08

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
MAT	212.6505737	
106860	16.018	
111924	25.1689737	
112442	43.1663	
112567	0.2973	
112885	128	

112885

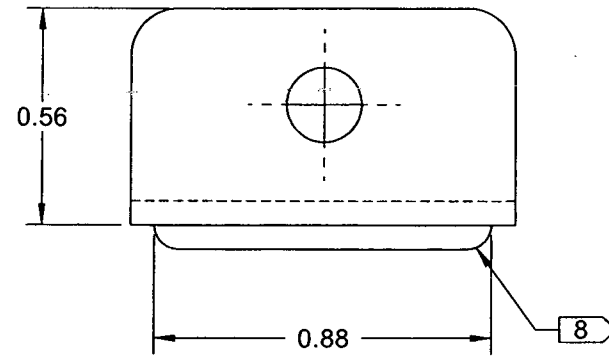
DART AEROSPACE LTD	Work Order:	53252
Description: Wear bar Forming Tool ** AT9541**	Part Number:	14015-1
Inspection Dwg: 14015 Rev: A prelim		Page 1 of 1

☒ First Article ☐ Prototype

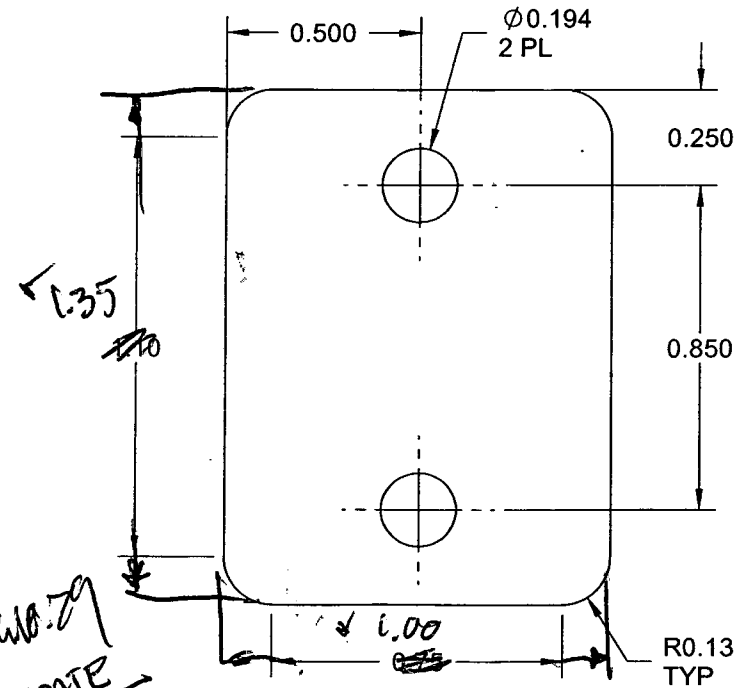
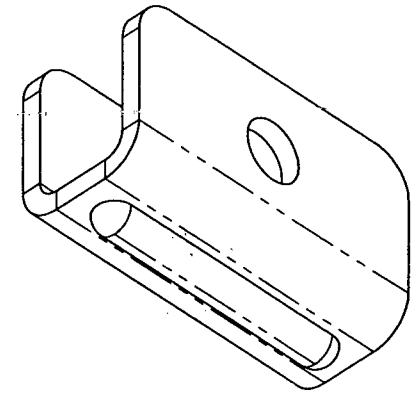
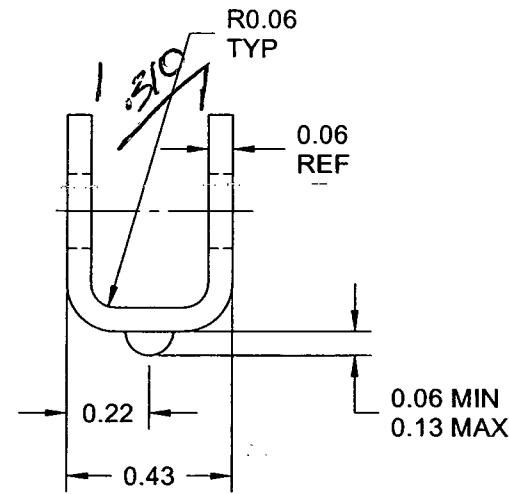
[illegible]

Measured by:	<i>HA</i>	Audited by:	<i>S</i>	Prototype Approval:	N/A
Date:	<i>09/10/29</i>	Date:	<i>09/10/29</i>	Date:	N/A

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	



D4015-1 WEARBAR
MAKE FROM D4015-1



D4015-1F WEARBAR FLAT PATTERN

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET ANNEALED 2B FINISH, 16 GAUGE (0.063 THICK)
PER AMS 5513 (304) OR 5524 (316) OR ASTM A240 OR ASME SA240
REF. DART SPEC. M304S16GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.02 lbs
- 8) 2059B HARDCOAT

PRELIMINARY ISSUE

04-10-26

A	NEW ISSUE	MB	09.10.23
REV.		BY	DATE
DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN			
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4015	SHEET 1 OF 1
APPROVED		TITLE	SCALE
DE APPR.		WEARBAR	NTS
DATE	09.10.23	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO10550

Purchase Order Date 08/10/2009

PO Print Date 08/10/2009

Page Number 1 of 2

VC-MAG002

From :

MAGNA STAINLESS
5775 RUE KIERAN
ST LAURENT, QC H4S 0A3
CA

FAXED

Contact Name

Vendor Phone

Vendor Fax

Vendor Account Nbr

800 363 6646

514 339 1105

Buyer

Requisition Nbr

Tax Resale Nbr

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

CAD

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended
1	M304S16GA	304/316 Sheet .063 4732	13/10/2009 Yes	✓ 128.00 sf	Purolator ground	\$5.3125	\$680.00
		Special Inst:	Purch. Mat: AISI 304/316 SS Sheet ANNEALED 2B finish Spec: MIL-S-5059 or AMS 5513(304) or AMS 5524(316) or ASTM A240 or ASME SA240				
2	M304S18GA	304/316 .050 Sheet	13/10/2009 Yes	✓ 128.00 sf	Purolator ground	\$4.2187	\$539.99
		Special Inst:	SAME AS ABOVE				
3	M304S20GA	304/316 .040 Sheet 3732	13/10/2009 Yes	✓ 96.00 sf	Purolator ground	\$3.5937	\$345.00
		Special Inst:	SAME AS ABOVE				
4	M304S26GA	304/316 0.018 SHEET	13/10/2009 Yes	✓ 96.00 sf	Purolator ground	\$1.8750	\$180.00

10/14/13

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required when applicable

Change Nbr: 1

Change Date: 08/10/2009



INSPECTION CERTIFICATE

7324691
TU2122

Shanxi Taigang Stainless Steel CO.,LTD Member of Taiyuan Iron and Steel (Group) Co.,LTD

NO.2 jiancaoping, Taiyuan, Shanxi, P.R.China

TEL: (0351)3013328 FAX: (0351)3017816

http://www.tisco.com.cn

E_mail: tgbxg@tisco.com.cn

MILL TEST CERTIFICATE

CERTIFICATE NO.	T08-692B
MATERIAL	AISI304 NO.2B FINISH
SPECIFICATION	ASTM A240-04/A480-04, ASME A240/A480 ASTM A666, AMS 5613/5511
L/C No.	

CUSTOMER

Ta Chen International, Inc.

CONTRACT NO.

L22628

DATE OF ISSUE

20080401

Product

SHEET

Melting furnace

E+VOD

Inspector's stamp



Mark of the Manufacturer

Shanxi Taiyuan Stainless Steel Co.,Ltd

NO.	Heat No.	Coil No.	Batch No.	Quantity	Dimensions (inch)	Weight(Pound)
50	A2800233	KA80261160J10H1	78255692	1	16GA x 48" x 96	4226
51	A2800233	KA80261160J20H3	78255694	1	16GA x 48" x 96	4248
52	A2800233	KA80261160J10H2	78255696	1	16GA x 48" x 96	4248
53	A2800233	KA80261160J20H2	78255700	1	16GA x 48" x 96	4303
54	A2800233	KA80261130F10H4	78255864	1	16GA x 48" x 96	3973
55	A2703845	KA80181530F10H1	78252411	1	14GA x 48" x 120	4707
56	A2703845	KA80181530F10H2	78252414	1	14GA x 48" x 120	4442

Chemical Composition

Heat No.	C	Si	Mn	P	S	Cr	Ni	Cu	Al	N	Mo	Ti
A2800233	0.042	0.491	1.143	0.026	0.002	18.337	8.012	0.119		0.020	0.093	
A2800233	0.042	0.491	1.143	0.026	0.002	18.337	8.012	0.119		0.020	0.093	
A2800233	0.042	0.491	1.143	0.026	0.002	18.337	8.012	0.119		0.020	0.093	
A2800233	0.042	0.491	1.143	0.026	0.002	18.337	8.012	0.119		0.020	0.093	
A2800233	0.042	0.491	1.143	0.026	0.002	18.337	8.012	0.119		0.020	0.093	
A2703845	0.043	0.538	1.234	0.027	0.002	18.164	8.050	0.218		0.024	0.114	
A2703845	0.043	0.538	1.234	0.027	0.002	18.164	8.050	0.218		0.024	0.114	

Mechanical Properties (Test temperature :20℃)

Test No.	Tensile Rm N/mm ²	R _{0.2} Yield _{0.2%} N/mm ²	R _{p1.0} Yield _{1.0%} N/mm ²	Elongation		Corrosion Tests	Hardness		
				A5 (%)	A50 (%)		HRB	HV	HRC
78255692-T	640	293			54		87.5		
78255694-T	640	293			54		87.5		
78255696-T	640	293			54		87.5		
78255700-T	640	293			54		87.5		
78255864-T	645	292			53		88.0		
78252411-T	640	299			55		86.5		
78252414-T	640	299			55		86.5		

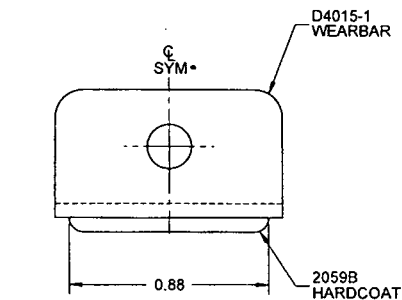
SPECTROMETER SORTING TEST: OK
EN 10204-3.1B

Place: Taiyuan

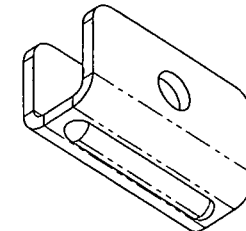
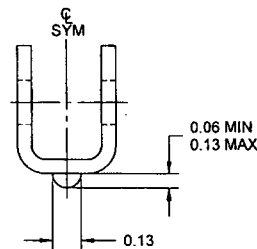
Work Inspector: 李忠新



ITEM	QTY	P/N	DESCRIPTION
1	1	D4015-041	WEARBAR WELDMENT
11	1	D4015-1	WEARBAR
21	A/R	2059B	HARDCOAT



D4015-041 WEARBAR WELDMENT



53252

RELEASED
2009-11-24

NOTES:

- 1) MATERIAL: SEE SHEET 2 FOR D4015-1
- 2) FINISH: POWDER COAT "BLACK SANDEXT" (4.3.5.7) PER DART QSI 005 4.3 \triangle/B
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.02 lbs
- 8) WELDING: PER DART QSI 004

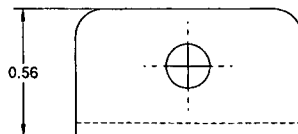
B	CHANGED COLOR TO BLACK SANDEXT	MB	09.11.13
A	NEW ISSUE	MB	09.10.23
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	09.11.13		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

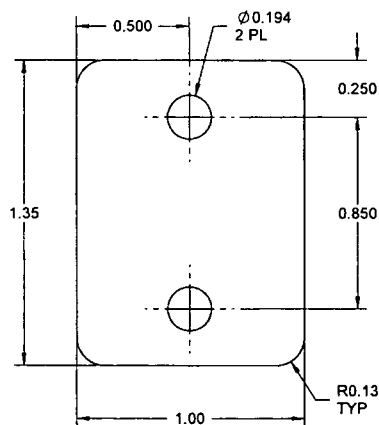
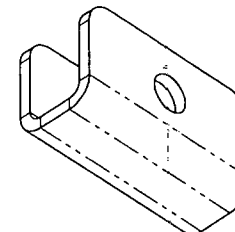
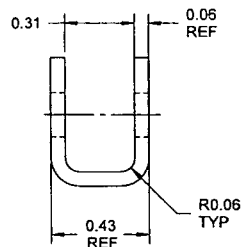
DRAWING NO. **D4015** REV. B
SHEET 1 OF 2

TITLE **WEARBAR WELDMENT** SCALE NTS

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D4015-1 WEARBAR
MAKE FROM D4015-1



D4015-1F WEARBAR FLAT PATTERN

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET ANNEALED 2B FINISH, 16 GAUGE (0.063 THICK)
PER AMS 5513 (304) OR 5524 (316) OR ASTM A240 OR ASME SA240
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- 2) FINISH: NONE
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- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.02 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED	AS	DRAWING NO.	REV. B
MFG. APPR.	DS	D4015	SHEET 2 OF 2
APPROVED	AD	TITLE	SCALE
DE APPR.	TH	WEARBAR WELDMENT	NTS
DATE	09.11.13	<small>COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

53252
RELEASED
2009-11-24